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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,218

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Katsuhiro Sasai

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EXAMINER

ZHU, WEIPING

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,218	Applicant(s) SASAI ET AL.	
	Examiner WEIPING ZHU	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2009 and 20 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 19, 2009 has been entered.

Status of Claims

2. Claims 10 and 11 are currently under examination wherein both claims have been amended in applicant's amendment filed on August 20, 2009. Claims 8, 9 and 12 have been cancelled in the same amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06-065647 A in view of JP 2003-268435 A.

With respect to claims 10 and 11, JP ('647 A) discloses a cold rolled annealed steel sheet having a composition by wt.% (abstract) as shown in the Table below.

Elements	Instant Claims	JP ('647 A)	Overlapping Ranges
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Art Unit: 1793

C	0.0003-0.003	≤ 0.003	0.0003-0.003
Si	≤ 0.01	≤ 0.1	≤ 0.01
Mn	≤ 0.1	0.05-0.4	0.05-0.1
P	≤ 0.02	≤ 0.05	≤ 0.02
S	0.005-0.01	≤ 0.05	0.005-0.01
N	0.0005-0.0025	≤ 0.004	0.0005-0.0025
Ti	0.015-0.07	0.02-0.1	0.02-0.07
Al	0.001-0.003	≤ 0.06	0.001-0.003
Nb	Not Claimed	0.002-0.04	
B	Not Added	0.0001-0.001	
La+Ce+Nd	0.002-0.02	Nd 0.0001-0.01 JP ('435 A)	0.002-0.01
Fe+Impurities	Balance	Balance	

JP ('647 A) does not disclose the steel sheet comprises La+Ce+Nd as claimed in the instant claim 10. However, it is noted that the instant claim 10 does not limit the contents of La, Ce and Nd individually, indicating that there is no limitation of the presence of all the three elements. Therefore, it is the examiner's interpretation that the presence of any one of La, Ce or Nd in the claimed content range would meet the claim limitation of the content of La+Ce+Nd. JP ('435 A) discloses adding 0.0001-0.01 wt. % of Nd to low-carbon thin steel sheets, which appear to have a similar composition as that of the low-carbon steel sheet of JP ('647 A) (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add 0.0001-0.01 wt. % of Nd to the composition of JP ('647 A) as disclosed by JP ('435 A) in order to decompose the small amount of dissolved oxygen and TiO_n inclusion left in the steel melt after the Ti deoxidation as disclosed by JP ('435 A) (abstract).

JP ('647 A) does not limit the types of Ti and Al as claimed. However, it would have been obvious to one of ordinary skill in the art to use claimed acid soluble Ti and Al with an expectation of success, because JP ('647 A) discloses the same utility of all types of Ti and Al. The content ranges of the elements of JP ('647 A) in view of JP

Art Unit: 1793

('435 A) overlap the claimed content ranges of the elements respectively. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05 I.

JP ('647 A) discloses adding 0.0001-0.001 wt. % of boron to improve secondary workability (paragraph [0007]). The instant invention also discloses that boron is effective for preventing secondary work embrittlement (lines 25-36, page 11). However, as disclosed in the instant specification the boron is added only when a steel sheet is used for parts subjected to extreme drawing etc. (lines 25-36, page 11). Therefore, it would have been obvious to one of ordinary skill in the art that when the steel sheet of JP ('647 A) is used for parts which are not subjected to extreme working, there would be no need to add any boron as instantly claimed.

JP ('647 A) in view of JP ('435 A) does not disclose the structures and properties of the steel sheet as claimed in the instant claim 10. However, it has been held where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established; see *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), MPEP 2112.01 [R-3] I. In the instant case, the claimed and JP ('647 A) in view of JP ('435 A)'s steel sheets are identical or substantially identical in composition and are produced by identical or substantially identical processes, therefore a prima facie case of obviousness exists. The same complex oxides, the same oxysulfites, the same $Ti_4C_2S_4$, the same average grain size of recrystallized grains, the same aspect ratio (i.e. the claimed γ -value) of the

Art Unit: 1793

recrystallized grain size and the same elongation would be expected in the steel sheet of JP ('647 A) in view of JP ('435 A) as in the claimed steel sheet.

Response to Arguments

4. The applicant's arguments filed on August 20, 2009 have been fully considered but they are not persuasive.

First, the applicant argues that the instantly claimed Ti wt. % range of 0.015-0.07 in conjunction with the instantly claimed amounts of S, La, Ce and Nd is critical and leads to unexpected results. In response, the examiner notes that the content ranges of Ti, S and Nd of JP ('647 A) in view of JP ('435 A) overlap the claimed ranges respectively as discussed above. A prima facie case of obviousness exists. See MPEP 2144.05. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the instantly claimed contents of Ti, S and Nd within the disclosed content ranges of JP ('647 A) in view of JP ('435 A) with expected success, because JP ('647 A) in view of JP ('435 A) discloses the same utilities of these contents over the entirely disclosed ranges. Furthermore, the applicant's position is stated by way of argument alone and therefore not considered to be of probative value. Evidence of non-obviousness such as criticality of ranges or unexpected results may be appropriate for a declaration under 37 CFR 1.132. See MPEP section 716.02.

Second, the applicant argues that JP ('435 A) does not teach the amount of Nd required for decomposition of oxygen and TiO_n if Ti amount is more than 0.01%. In response, the examiner notes that JP ('435 A) clearly discloses that an appropriate range of Nd of 0.0001-0.01 wt. % is added to the molten steel having greater than 0.005

Art Unit: 1793

wt. % of Ti added (abstract). An amount of Ti of greater than 0.005 wt. % as disclosed by JP ('435 A) would obviously include the amount of more than 0.01%. JP ('647 A) in view of JP ('435 A) does not have to teach controlling the amounts of Ti, S and Nd in the steel as long as the content ranges of Ti, S and Nd of JP ('647 A) in view of JP ('435 A) overlap the instantly claimed ranges respectively.

Third, the applicant argues that the instant claim 11 excludes added B while JP ('647 A) teaches adding B to improve secondary workability. In response, see the reason for the rejection of the claimed feature in the Section 3 above.

Conclusions

5. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

WZ

11/5/2009